

EXHIBIT 10

Material Safety Data Sheet

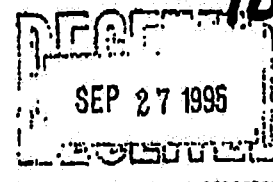
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Ciba Additives

Section 1. Chemical Product and Company Identification

Product Name: Irgafos 168
Chemical Name: Tris(2,4-di-*tert*-butylphenyl) phosphite
Family: Phosphite
Formula: C42 H68 O3 P
Product Use: Process Stabilizer
Manufacturer:

Ciba Additives
Ciba-Geigy Corporation
Seven Skyline Drive
Hawthorne, New York 10532-2188
Tel: (914) 785-2000
Fax: (914) 847-7086



Emergency Phone Numbers:

(914) 785-4311 — Monday—Friday, 8 am—5 pm (EST)
(800) 888-8372 — 24-hour

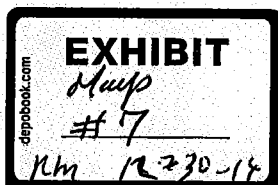
Information Contacts:

For technical information contact your technical sales representative. For additional health / safety / regulatory information, contact Product Safety Manager at (914) 785-4311.

Important Use Information:

This material is not intended for use in products for which prolonged contact with mucous membranes or abraded skin, or implantation within the human body, is specifically intended, unless the finished product has been tested in accordance with the Food and Drug Administration and/or other applicable safety testing requirements. Because of the wide range of such potential uses, Ciba-Geigy Corporation is not able to recommend this material as safe and effective for such uses and assumes no liability for such uses.

Section 2. Composition / Information on Ingredients



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Hazardous Ingredients:

Name	CASRN	Percent (by wt)	Exposure Limits			Carcinogen
			OSHA TWA / STEL	ACGIH TWA / STEL	Ciba-Geigy IEL	
Ti[(2,4-dihydroxyphenyl) phosphite	31670-04-4	100	NE / NE	NE / NE	10 mg/m ³	N/R / N/R / N/R
NE—None established N/R—Not reviewed						

Section 3. Hazards Identification

Emergency Overview

- White to off-white powder
- This product is not volatile.
- Use proper grounding techniques when emptying this product from containers weighing more than 1 pound. A build-up of hazardous electrostatic charges could cause a flash fire or explosion when contents are emptied into a flammable atmosphere. See Section 7.
- This product is moderately toxic to aquatic organisms. Prevent spillage or leakage to a body of water.
- This product presents little or no immediate hazard to people if spilled or released.
- Sweep or shovel spilled material and place into a sealable container. Pre-wet the material to prevent dust build-up. Dispose in accordance with local, state and federal regulations. Incineration is recommended. This product is not a hazardous waste under RCRA.

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Potential Health Effects, Signs and Symptoms of Exposure:**Primary Route of Entry:**

Dermal, inhalation, ingestion

Eye:

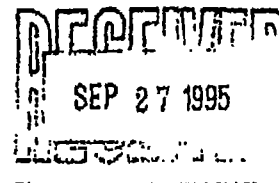
This product is not expected to cause eye irritation.

Skin:

This product is not expected to cause skin irritation. It is not expected to cause allergic skin reactions based on test results.

Ingestion:

Small amounts, if swallowed, are not expected to cause injury.

Inhalation:Considered to present little risk if inhaled. An Internal Exposure Limit (IEL) of 10 mg/m³ air (8-hour TWA) has been established. Sampling methodology is available from Ciba Additives; call Product Safety Manager at (914)-785-4311.

NOTE: Refer to Section 11, Toxicological Information for Details.

Section 4. First Aid Measures**First Aid for Eye:**

Following eye contact, flush eyes with plenty of water for several minutes. Get medical attention if irritation occurs.

First Aid for Skin:

Following skin contact, wipe away excess material with a dry towel. Then wash affected areas with plenty of water and soap, if available, for several minutes. Get medical attention if irritation occurs.

First Aid for Inhalation:

If inhaled, remove from area to fresh air. Get medical attention if irritation develops, or if breathing becomes difficult.

First Aid for Ingestion:

If swallowed, give at least 3-4 glasses of water, but DO NOT induce vomiting. Do not give anything by mouth to an unconscious or convulsing person.

Note to Physicians/Aggravated Medical Conditions:

None known.

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Section 5. Fire Fighting Measures

Flash Point (°F/°C)	UEL (vol%)	LEL (vol%)
> 302 / > 150	Not Determined	Not Determined

Method:

Marcusson (open pan)

Extinguishing Media:

Carbon dioxide, dry chemical, foam, water mist.

Fire Fighting Instructions:

- Use self-contained breathing apparatus.

Unusual Hazards:

The product can form an explosive dust/air mixture. Avoid dust formation and control ignition sources. Employ grounding, venting and explosion relief provisions in accord with accepted engineering practices in process operations capable of generating dust and/or static electricity.

Section 6. Accidental Release Measures

Spill or Release Procedures:

- Sweep or shovel into approved disposal container. Vacuum contaminated area. Avoid creating dusty conditions. Flush contaminated area with water.

Section 7. Handling and Storage

Handling:

- In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid contact with eyes and prolonged or repeated skin contact. Avoid continuous or repetitive breathing of dust. Use only with adequate ventilation. For industrial use only.
- Wash thoroughly after handling and before eating, drinking, or using tobacco products.

Storage:

- Keep container tightly closed when not in use and during transport.

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SEP 27 1995 Ciba Additives

Explosion Hazard:

- Warning! Conductive (or anti-static) package: This applies to product packaged in fused lined fiber drums, loose carbon-black filled fiber drums, or super sacks/bulk bags. When emptying contents, use proper grounding techniques. Failure to use proper grounding techniques may result in the build-up of hazardous electrostatic charges which could cause a flash fire or explosion when contents are emptied into a flammable atmosphere.

Non-conductive package and/or liner: This applies to product packaged in boxes, loose polyethylene-lined fiber drums or plastic pails. Empty only into inert or non-flammable atmosphere. Emptying contents into a non-inert atmosphere where flammable vapors may be present could cause a flash fire or explosion due to possible electrostatic discharge. (See National Fire Protection Association (NFPA) Code 77, "Recommended practice on static electricity," 1988 (or latest) edition, Chapter 7, Sections 8 and 9, and Plant Operations Progress, Vol. 7, No. 1, January 1988 for more information.)

- This warning does not apply to one pound or smaller containers.

Section 8. Exposure Controls / Personal Protection

Engineering Controls:

Work in well-ventilated areas.

Personal Protective Equipment:

General:

Wear coveralls.

Eye / Face Protection:

Wear safety glasses or goggles to protect against dust particles.

Skin Protection:

Wear gloves as a standard handling procedure.

Respiratory Protection:

Use NIOSH-approved dust respirator, if needed.

Section 9. Physical and Chemical Properties

Appearance:

White to off-white powder

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Boiling Point:

Not applicable

Evaporation Rate:

Not applicable

Freezing/Melting Point:

181 - 186°C

Ignition:

380°C BAM

Octanol/Water Partition Coefficient:

Log Po/w: > 6

Odor and Odor Threshold:

No discernable odor

pH:

Not applicable

Solubility:

Solvent	Temperature	Solubility
Cyclohexane	20°C	10%
Methylene Chloride	20°C	38%
Water	20°C	<1ppm

Specific Gravity:1.0 - 1.05 (H₂O = 1)**Vapor Density:**

Not applicable

Vapor Pressure:~1 x 10⁻¹⁰ mmHg at 20°C**Percent Volatile:**

<0.5%

Section 10. Stability and Reactivity**Chemical Stability:**

Stable.

Incompatibility with Other Materials:

Strong oxidizing agents, strong acids, strong bases

Hazardous Decomposition Products:

Thermal decomposition and burning may produce carbon monoxide, carbon dioxide, phosphorus oxides, and other toxic compounds.

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Hazardous Polymerization:
Will not occur.

Section 11. Toxicological Information

Acute Oral Toxicity:

LD50 (Rats, Mice, Chinese hamster): > 6,000 mg/kg

Intraperitoneal LD50:

(Rats) > 5,000 mg/kg

Acute Dermal Toxicity:

LD50 (Rats): > 2,000 mg/kg

Irritation - Skin:

(Rabbits) Not an irritant

Irritation - Eye:

(Rabbits) Not an irritant

Sensitization:

(Guinea pigs) Not a sensitizer in the optimization test

Teratogenicity/Reproductive Toxicity:

Teratogenicity (Rabbits):

No embryotoxic or teratogenic effects observed for dose levels of 0, 200, 600, and 1,200 mg/kg given by gavage on gestation days 6-18.

2-Generation Reproductive Study (Rats):

Male and female albino rats received a diet containing 0, 114, 285.7 and 714 mg/kg/day. All doses were well tolerated with respect to general toxic effects. The high dose caused a slight reduction of the fertility rate in F0 parental animals. However, this observation was not seen in the F1 parents, implying that it may have occurred just by chance and was not treatment related. No other parameters were adversely affected. The no-observable effect level (NOEL) was 285.7 mg/kg/day.

Mutagenicity:

Ames test: Non-mutagenic

Chromosome study (spermatogonia/spermatocytes, male mouse):

Non-mutagenic

Saccharomyces cerevisiae MP-1: Non-mutagenic

Chromosome study in somatic cells (Chinese hamster): Non-mutagenic

Sister chromatid exchange (Chinese hamster): Non-mutagenic

Nucleus anomaly test (Chinese hamster): Non-mutagenic

Dominant lethal test (Mice): No evidence of a dominant-lethal effect at any of the mating periods tested.

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Neurotoxicity:

White leghorn hen: No signs of neurotoxicity.

Subchronic Toxicity:

3-Month Toxicity Study (Rats):

Groups of animals were treated with 0, 125, 250, 500 and 1,000 mg/kg/day by gavage for 13 weeks. Separate animals were allocated for recovery groups at the high dose and control. At 1,000 mg/kg, relative and absolute kidney weights of the females only were increased, an increase which persisted until the end of the recovery period. Parallel to this observation lower urine volumes were found in the females of the high dose group only. The NOEL was 500 mg/kg/day.

3-Month Dietary Toxicity Study (Dogs):

Groups of Beagle dogs were treated with 0, 28, 80 and 318 mg/kg/day in the diet for 13 weeks. All parameters tested were comparable to those of the control animals. The NOEL was at least 318 mg/kg/day.

Chronic Toxicity/Carcinogenicity:

Groups of CD rats were fed diets for 104 weeks containing an equivalent intake of 0, 17.8, 53.4 and 147 mg/kg/day. No treatment-related effects or increased tumor incidences were seen. The NOEL was at least 147 mg/kg/day.

Cholinesterase Inhibition:

Cholinesterase inhibition *in vitro*: No inhibition at a concentration of 10 ppm.

Section 12. Ecological Information

Ecotoxicological Information:

Acute Toxicity to Fish:

Zebra fish, 96-hour, LC50: 4.05 ppm.
Golden orfe, 96-hour, LC50: 42 ppm.
Rainbow trout, 96-hour, LC50: 49 ppm.
Carp, 96-hour, LC50: 66 ppm.
Catfish, 96-hour, LC50: 70 ppm.
Bluegill, 96-hour, LC50: 84 ppm.

Acute Toxicity to Invertebrates:

Daphnia magna, 24-hour, EC50: 510 ppm.

Acute Toxicity to Algae:

Green algae, 0-72 hour, EC50: > 75.2 ppm.

Bioconcentration:

Japanese (MITI) bioaccumulation study, carp: Not bioaccumulative at test concentrations of 1.0 and 0.15 ppm.

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Toxicity to Sewage Bacteria:

Inhibitory concentration on respiration of aerobic waste water bacteria
IC20, IC50, and IC80: >100 ppm

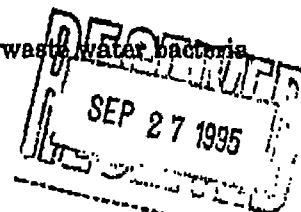
Chemical Fate Information:

Chemical Oxygen Demand:

0.92 g COD/g Irgafos 168

Biodegradability:

Degradability in modified Sturm test: Not biodegradable, with 3-6% in
28 days.



Section 13. Disposal Considerations

- Incinerate in a chemical incinerator equipped with an after-burner and scrubber. Follow all federal, state and local regulations.

Section 14. Transport Information

This product is not regulated by any means of transport.

Section 15. Regulatory Information

US Federal Regulations:

Clean Air Act: HAP:

This product contains no hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act.

Clean Air Act: ODS:

This product neither contains, nor was manufactured with, a Class I or Class II ozone depleting substance (ODS). We have relied on our suppliers labeling their products. None have done so.

Clean Water Act: Priority Pollutant:

This product contains no chemicals listed under the U.S. Clean Water Act Priority Pollutant List.

FDA: Food Packaging Status:

This product has been cleared by the FDA for use as an indirect food additive in food packaging and/or other applications. Call or write for specific information.

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Occupational Safety and Health Act:

This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200). Its hazards are:

Fire; sudden release of pressure (explosion) hazard

RCRA:

This product is not considered to be a hazardous waste under RCRA (40 CFR 261).

SARA Title III: Section 302:

This product contains no chemicals regulated under Section 302 as extremely hazardous substances.

SARA Title III: Section 304:

This product contains no chemicals regulated under Section 304 as extremely hazardous chemicals for emergency release notification ("CERCLA" List).

SARA Title III: Section 311-312:

This product is considered hazardous under the OSHA Hazard Communication Standard (HCS) and is regulated under Section 311-312 (40 CFR 370). Its hazards are:

Fire; sudden release of pressure (explosion) hazard

SARA Title III: Section 313:

This product contains no chemical requiring annual routine Toxic Chemical Release Reporting under Section 313.

TSCA Section 5(e): Consent Order:

This product is not subject to a Section 5(e) Consent Order or Significant New Use Rule (SNUR).

TSCA Section 5(f): Actions:

This product is not subject to a Section 5(f)/6(a) rule.

TSCA Section 8(b): Inventory:

All chemical(s) comprising this product are listed on the TSCA inventory.

TSCA Sec. 12(b): Export Notification:

This product does not contain any chemicals subject to Section 12(b) export notification.

International Regulations:

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AICS: Australian Inventory:

This product contains only chemicals which are currently listed on the Australian Inventory of Chemical Substances.

CDSL: Canadian Inventory:

This product contains only chemicals which are currently listed on the Canadian Domestic Substance List.

EINECS: European Inventory:

This product contains only chemicals which are currently listed on the European Inventory of Existing Commercial Chemical Substances (EINECS).

MITI: Japanese Inventory:

This product contains only chemicals currently listed on the Japanese Ministry of International Trade and Industry List of Existing and New Chemical Substances. The MITI registration number(s) are:

3-3510

KCSL: Korean Inventory:

This product contains only chemicals which are currently listed on the Korean Chemical Substances List.

Philippine Inventory:

This product contains only chemicals which are currently listed on the Philippine Inventory of Chemical Substances.

State Regulations:

CA Proposition 65:

This product does not contain any chemicals currently on the California List of Known Carcinogens and Reproductive Toxins.

MA Right-to-Know Law:

This product does not contain any chemicals which are subject to Massachusetts Right-to-Know Law disclosure requirement.

NJ Right-to-Know Law:

The following is required composition information:

Chemical Name: Tris(2,4-di-*tert*-butylphenyl) phosphite

CASRN: 31570-04-4

% in Composition: 100



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PA Right-to-Know Law:

The following is required composition information:

Chemical Name: Tris(2,4-di-*tert*-butylphenyl) phosphite
CASRN: 31570-04-4
% in Composition: 100
Comments: Not on Pennsylvania Hazardous Substance List.

Section 16. Other Information

Label Text:

EC Labeling: None required

Hazard Rating System:

NFPA:

Health: 1 / Flammability: 1 / Reactivity: 0

HMIS:

Health: 1 / Flammability: 1 / Reactivity: 0

Product Number: 362134

Revised Sections Since Last Version:

Section 9.

Section 15.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein.

Approved By: 

Wil W. Wang
Manager, Product Safety



Bruce A. Schwemmer
Director, Regulatory Affairs

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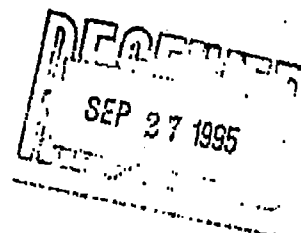
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